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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,325	08/27/2003	Axel Klimmek	A 91802	5357
7590	04/22/2005		EXAMINER	
Walter Ottesen Patent Attorney P.O. Box 4026 Gaithersburg, MD 20885-4026			NGUYEN, TU MINH	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No.	Applicant(s)	
	10/648,325	KLIMMEK ET AL.	
	Examiner	Art Unit	
	Tu M. Nguyen	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>082703,040105</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Blair et al. (U.S. Patent 6,698,194).

Re claim 1, as shown in Figure 1, Blair et al. disclose an internal combustion engine including a two-stroke engine for a handheld portable work apparatus, the internal combustion engine comprising:

- an outlet (5) for discharging exhaust gases in a flow direction from the engine (1);
- an exhaust-gas muffler (7) having an inlet opening for receiving the exhaust gases; and,
- at least one resonance pipe (16) arranged in the flow direction between the outlet and the inlet opening for fluidly connecting the outlet to the inlet.

Re claim 2, in the engine of Blair et al., the resonance pipe has a diaphragm for opening into the exhaust-gas muffler.

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Re claim 10, in the engine of Blair et al., the resonance pipe is one of a plurality of resonance pipes (16, 3).

Re claim 11, in the engine of Blair et al., the inlet in at least one (3) of the resonance pipes is closeable.

Re claim 12, in the engine of Blair et al., at least one inlet opening into the exhaust-gas muffler is configured to be closeable.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Tryhorn et al. (U.S. Patent 3,064,417).

Re claim 1, as shown in Figure 7, Tryhorn et al. disclose an internal combustion engine including a two-stroke engine for a handheld portable work apparatus, the internal combustion engine comprising:

- an outlet for discharging exhaust gases in a flow direction from the engine (2);
- an exhaust muffler (18) having an inlet opening for receiving the exhaust gases; and,
- at least one resonance pipe (not numbered but clearly shown in Figure 7) arranged in the flow direction between the outlet and the inlet opening for fluidly connecting the outlet to the inlet.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blair et al. as applied to claim 2 above, in view of legal precedent.

Re claims 3-4, the engine of Blair et al. discloses the invention as cited above, however, fails to disclose that the diaphragm has an equivalent diameter measured in millimeters which amounts approximately 1 to 3 times the square root of the volume of the piston displacement of the engine with the volume being measured in cubic centimeters.

Blair et al. disclose the claimed invention except for specifying an optimum range of equivalent diameter for the diaphragm of about 1 to 3 times the square root of the volume of the piston displacement. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a specific optimum range of equivalent diameter for the diaphragm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

In re Aller, 105 USPQ 233.

Re claim 5, in the engine of Blair et al., the equivalent diameter is variable.

Re claim 6, the engine of Blair et al. discloses the invention as cited above, however, fails to disclose that the resonance pipe has an equivalent diameter measured in millimeters which amounts to approximately 2.5 to 6 times the square root of the volume of the piston displacement of the engine with the volume being measured in cubic centimeters.

Blair et al. disclose the claimed invention except for specifying an optimum range of equivalent diameter for the resonance pipe of about 2.5 to 6 times the square root of the volume of the piston displacement. It would have been obvious to one having ordinary skill in the art at

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the time the invention was made to provide a specific optimum range of equivalent diameter for the resonance pipe, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Re claims 7-9, in the engine of Blair et al., the equivalent diameter of the resonance pipe is approximately constant over the length thereof, wherein the length of the resonance pipe is matched to 60% to 100% of the rated rpm of the engine speed.

Prior Art

6. The IDS (PTO-1449) filed on August 27, 2003 and April 1, 2005 have been considered.

An initialized copy of each is attached hereto.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents: Guercken (U.S. Patent 2,581,668), Kopper (U.S. Patent 3,254,484), Laimbock (U.S. Patent 5,012,642), and Bosch et al. (U.S. Patent 6,158,215) further disclose a state of the art.

Communication

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

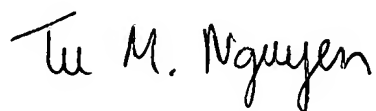
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMN

April 18, 2005



Tu M. Nguyen

Primary Examiner

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